



Launch Mission Execution Forecast

Mission: Falcon 9 NASA Crew-2

Issued: 19 April 2021 / 0730L (1130Z)

Valid: 22 April 2021 / 0607-0617L (10007-1017Z)



Forecast Discussion: A wet and unstable pattern will continue over Central Florida as a frontal boundary remains stalled across the area. Rain showers and isolated thunderstorms are likely as low pressure waves move along the boundary over the next two days. On Wednesday, high pressure begins to build in and push the unsettled weather south through the day. By Thursday morning, the high pressure will be centered near Arkansas, creating gusty northerly winds along the Space Coast due to the pressure gradient between the high and the departing boundary. The primary weather concern Thursday morning will be these gusty Liftoff Winds associated with this strong pressure gradient.

By Friday morning, the high center will move over the Carolinas, allowing winds to diminish and turn easterly over the Spaceport. The primary launch weather concern for a Friday morning attempt will be Flight Through Precipitation with very isolated, low-topped coastal showers associated with the onshore flow.

Launch Day	Probability of Violating Weather Constraints					
	20%	Primary Concerns: Liftoff Winds				
	Weather Conditions				Additional Risk Criteria	
	Weather/Visibility: None / 7 mi.	Clouds				Upper-Level Wind Shear: Low
	Temp/Humidity: 68°F / 72%	Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather: Moderate
24-Hour Delay	Liftoff Winds (200'): 020° 17-22 mph	Stratocumulus	Few	2,500	6,000	Solar Activity: Low
	Probability of Violating Weather Constraints					
	20%	Primary Concerns: Flight Through Precipitation				
	Weather Conditions				Additional Risk Criteria	
	Weather/Visibility: None / 7 mi.	Clouds				Upper-Level Wind Shear: Moderate
	Temp/Humidity: 72°F / 78%	Type	Coverage	Base (ft)	Tops (ft)	Booster Recovery Weather: Low
	Liftoff Winds (200'): 080° 12-17 mph	Cumulus	Scattered	3,000	7,000	Solar Activity: Low
	Note: The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.					
Next Forecast Will Be Issued		20 April 2021				